M2R5 Web Designing & Publishing

Introduction to Web Design

Topic Reference | Client-Server Architecture Explained | October 30, 2026

Topic Summary

Topic: Client-Server Architecture Explained

Book: (M2-R5) Web Designing & Publishing

1 Client-Server Architecture Explained

> Understand the fundamental client-server model that underpins all web communication and how requests and responses are handled.

Key Points:

The client-server model is a fundamental concept in networking, particularly for the World Wide Web. It describes how different applications communicate and share resources over a network. In this model, two main components interact: the **client** and the **server**.

Client:

- A **client** is typically a program or device that requests services or resources from a server.
- In the context of the web, your web browser (like Chrome, Edge, Safari) is the client.
- When you type a URL or click a link, your browser acts as the client, sending requests for web pages, images, or other data.
- Clients initiate communication and wait for a response from the server.

Server:

- A **server** is a powerful computer program or device that provides services or resources to clients.
- Web servers store website files (HTML, CSS, JavaScript, images) and respond to requests from clients.
- When a client sends a request, the server processes it, retrieves the requested data, and sends it back as a response.
- Servers are designed to handle multiple client requests simultaneously and continuously.

The Request-Response Cycle:

The interaction between a client and a server follows a specific pattern:

1. The client sends a **request** to the server (e.g., an HTTP GET request for a web page).
2. The server receives the request, processes it, and retrieves the necessary data.
3. The server sends a **response** back to the client, containing the requested data (e.g., the HTML content of a web page).
4. The client receives the response and takes appropriate action, such as displaying the web page.

This cyclical interaction forms the backbone of how information is exchanged across the internet, enabling seamless browsing and data access.

Exam Tip:

Be able to define client and server, and explain the request-response cycle in the context of web browsing.